Politics of Oil Supply

National Oil Companies vs. International Oil Companies

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Oil and gas supplies are produced by specialized firms that are usually described as National Oil Companies (NOCs), which are state owned and International Oil Companies (IOCs) that are owned by shareholders and the shares of which are traded on various stock markets. However, in the energy business, the concept of companies held in private hands versus state-owned companies can be misleading. The differences between the two are not always clear, some NOCs act as if they were large IOCs and some NOCs work very closely with the IOCs. This chapter equates “private” companies with the main IOCs, like ExxonMobil, Shell, ChevronTexaco, BP, Total, etc. It also equates the state-owned companies with the NOCs like Saudi Aramco, the National Iranian Oil Company (NIOC), PDVSA of Venezuela, or Kuwait Oil Company (KOC).

It would seem self evident that NOCs would be established and managed with the sole purpose of protecting the interest of the people of a given state. After all, oil and gas reserves are non-renewable and therefore their extractions impoverish the country daily. It thus becomes vital for a national oil or gas company to maximize the return on these resources, minimize the cost and keep the reserves going for as long as possible. Consequently, the yearly rate of return on investments should be of no importance but replaced by a long-term analysis of how the country has gained from the extraction and sale of the non-renewable assets and benefit the future generations. Unfortunately, such analysis by the NOCs seems to be more the exception than the rule.

Many countries take advantage of any new income from oil to buy arms, finance repression to remain in power; or even more often the money is siphoned out to Swiss accounts, bypassing the original aim of the NOC to create wealth for its own country.

For their part, the IOCs main concern is or should be to maximize the return to their shareholders, within the constraint of their understanding of their social responsibility. Thus, the primary goal of IOCs is to maximize their rate of return on investment (RoI). The stock markets of the world are the arbiters of whether the RoI is deemed to be high enough or too low. In order to maximize RoI, IOCs will have to focus not on whether their production will benefit the future generations of a given state, but whether their annual return will meet the expectations of the market. In all fairness to the IOCs, the process of maximizing returns is indeed complicated and not necessarily a short-term exercise. Indeed, most energy projects from prospection to extraction, to refining and marketing can easily take 10 years to come to proper fruition.
Hence, companies have to invest billions of dollars in highly risky prospection and extraction projects not really knowing if within the 10-year horizon of their decision, the prospective oil or gas will hit the market at a price able to match costs and shareholders’ expectations.

This chapter will seek to show that in spite of the obvious differences between the goals and missions of the IOCs and NOCs, there are many different types of each and they place themselves in a continuum from the NOCs totally controlled by their government to NOCs totally independent from theirs to IOCs that are in fact dependent on their own state of origin to multinational firms with minimal obligations to their home country. By and large, the NOCs will seek to benefit their own country, and the IOCs will seek to benefit their shareholders, but neither will seek to benefit the world at large, despite the publicity campaigns of their public relations departments and consultants. Ultimately, it appears in this analysis that the NOCs have the capacity to become the main organizations in energy production as they control most of the world’s reserves. However, to achieve a modicum of success in husbanding their reserves and production they must preserve their independence from their own state.

IOCs, on the other hand, have often been criticized, sometimes unfairly so, for trampling over people’s and countries’ rights, damaging the environment and for what could appear as callousness, because of their willingness to work with existing dictators, or lack of concern for local tribes and environments, all for the sake of maximizing their RoI. On the other hand the IOCs, by and large, do not own their oil and gas reserves in a strict sense; one way or another they are at the mercy of whoever controls the land where they operate. Hence, sometimes they work with some of the worst regimes to maintain their production levels. The whole issue of morality of such investments is difficult to gauge. IOCs are often caught between the requirement of the shareholders and their social responsibility in a given area. As could be expected, they sometimes will be viewed as morally excellent or morally abhorrent. In fact most companies will have to be mostly amoral and view their actions and investments as part of their doing business. Of course, just like the NOCs go from the most highly professional to the most highly incompetent, the IOCs will go from the most highly profitable and socially responsible, to the most greedy and socially irresponsible.

Furthermore, the distinctions between NOCs and IOCs are not always as clear-cut as it might appear at first. The IOCs are not “private.” Many of them are corporations with sometimes millions of shareholders both individuals, pension funds, mutual funds and the like. The interest of these shareholders can sometimes be extremely powerful and be as important as the wealth of a nation is to a National Oil Company 100% owned by the state. To complicate matters, IOCs have operations, which cover numerous countries and their shareholders come from many different financial centers. Moreover, many companies are “mixed.” They can have a large shareholding from the state and a large number of shareholders from the public at large. Are these companies NOCs or IOCs? The control is in the eye of the beholder (or of the shareholder in this case). Some companies fully state-owned, on the other hand, can only operate if they are well supported by foreign firms who provide the technical know-how and often the marketing. Hence, it seems that the NOCs can either become fully professional, like Saudi Aramco, or they will have to turn to the IOCs to catch up. On the other hand, as the IOCs lose their ability to find reserves, they may become more involved in some of the NOCs business and we could see a meshing of both interests in the long run. One could also speculate that even the NOCs from countries with large oil and gas reserves may begin to see decline in their easy oil and gas and could start eyeing investments abroad, thus becoming much closer to the IOCs who need to replace reserves every year. Hence, while IOCs may join forces with NOCs, we may see the latter become more like the former.
NOCs

There are as many types of NOCs as there are oil producing countries. Each one adapts and serves the needs of the country from which it emanates. However, one of the variables that seem to influence the management of the NOCs most is their level of independence from the state apparatus. Some NOCs appear to be very independent from day to day interference from their governments. Some even appear to be independent in making important strategic decisions with regards to production and investment levels. What perhaps appears to be a recurring pattern is that the most successful NOCs are the ones that are the most independent from their government.

Of course, the meaning of “successful” is charged. For the purpose of this paper, we will assume that “successful” means the ability to maintain oil and gas fields, provide stability to production, use “best practices” for exploration, exploitation, refining, and export of oil and gas. The NOC will also be deemed successful if it maintains environmentally acceptable operations, maximizes income for the country, minimizes foreign influence and does not become prey to corrupt practices. Of course for countries that have limited resources some of these criteria cancel each other out. It is difficult to provide “best practices” and be environmentally acceptable when production is small and funds are lacking. However, by and large, companies that follow best practices, in the long run will minimize accidents and maximize income.

The NOCs that appear to have the most operational freedom are the Saudi Aramco and Statoil of Norway. Both manage huge operations using very advanced technologies, on which they spend large amounts. Saudi Aramco has invested about $62bn on increasing capacity in its fields to 12mbpd\(^1\) and Statoil has invested billions as well in limiting the decline of the North Sea fields, in which it works and which passed their peak some years ago.

Perhaps the most important factor in establishing independence by an NOC is its ability to retain some of the money it earns from the export of oil and gas to reinvest in its operations and to do so without having to revert to the government for approval of day to day expenses and basic investment in oil field maintenance, separation facilities, refineries or harbor development. Below (Figure 4.1) is a brief sketch of the flow of funds, likely to be observed at a very large NOC like Saudi Aramco. This chart does not claim to be representing the actual flow of money, nor does it show all the very intricate transactions that surround operations that gross about $200bn per year. It is merely a sketch of how funds circulate and at which moment in this flow, the NOC has the opportunity to keep a portion of the funds for its own use.

Figure 4.1 describes how funds flow from the moment of purchase of oil by Saudi Aramco’s clients to the moment they are used either by the state or by Saudi Aramco. Saudi Aramco, like most of the exporting countries of the Gulf,\(^2\) are very large, oil companies well capitalized and considered credit-worthy by Saudi Aramco. The Gulf NOCs do not sell to oil traders, mainly for ensuring maximum quality of credit. Most of the payments to Saudi Aramco on the sale of crude oil are made by use of irrevocable letters of credits, except for sale to the original founders of Aramco.\(^3\) The payments are always in US dollars and paid by the openers of the letters of credit to one of the very large US banks in New York, most likely JPMorganChase or Citibank. The payments received are likely to be allocated by the New York bank per standing instruction from Saudi Aramco to accounts at the same bank in New York and in London. Enough funds are kept in New York to have cash on hand to pay for the purchases of Saudi Aramco and be available when any of the numerous letters of credit opened for the account of Saudi Aramco are negotiated by the sellers’ banks and payments due hit the account. The balance of the money received from the oil purchase is then placed in Eurodollar accounts in London where they earn interest and are safe from any unlikely, but always possible, effort by the US Treasury to block the US dollar accounts of a depositor. Indeed, from the point of view of the Saudis or indeed from that of any
recipient of large flows of money, keeping funds in Eurodollar accounts in London puts the funds under the regulations of England and less subject to political whimsy in Washington.

From time to time, Saudi Aramco will transfer funds to the accounts of the Saudi Arabian Monetary Agency (SAMA), probably, but not necessarily, in the same bank. SAMA in turn transfers funds from time to time, probably after the funds reach a certain pre-arranged level, to the Ministry of Finance for use under the budget. Amounts not needed by the ministry are placed in SAMA’s investment account. SAMA is responsible for investing the balances and all the foreign reserves of the Kingdom, as well as the reserves of the various semi-independent agencies of the government, like the General Organization for Social Insurance (GOSI), or the Public Pension Authority (PPA). Just like Saudi Aramco, SAMA and the Ministry of Finance will keep balances in New York for payments of letters of credit opened for purchases by the government. The short-term balances will be invested in London Eurodollar accounts and in US Short-Term Treasuries. The Saudis do not technically have a Sovereign Wealth Fund in the sense that all the reserves are managed directly by SAMA and mostly kept in highly liquid and safe government instruments.

To an outsider, it seems that the major difference between the Saudis handling their money flows is that Saudi Aramco does not appear ever to have shortages of funds for its projects. It spends as needed on oil field maintenance and development. It does not lobby for more funds, as is the case for the Iranian or the Venezuelan oil authorities. In other words, Saudi Aramco seems to have its own funds to manage as it sees fit for the good of the company. In that sense, Saudi Aramco appears to be like any major IOC, such as ExxonMobil. This ability to use funds for proper management of the company, points to the strong likelihood that the Kingdom allows Saudi Aramco to maintain a substantial balance in its account. Saudi Aramco does not seem to have to go to the Ministry of Finance or to the council of ministers

Figure 4.1 Possible money flows in Saudi oil transactions 2010

Notes:
* All buyers of Saudi Aramco have to provide irrevocable Letters of Credits for a major bank confirmed by an accepted Saudi bank payable at 30 day sight. The US companies that founded Aramco do not have to provide L/Cs
** Estimates from Jadwa Investments in Riyadh. Chart Book September 2010, p. 20
*** Estimates by the author based on and estimated cost of production of $4/b and expenses for overhead and investments of $2/b
and plead for its budget. Indeed, Saudi Aramco seems to have enough leeway, i.e. cash, to invest not just in maintenance of the fields, and day-to-day expenses but also in major capital expenses like refineries, harbors, etc. Only when very large investments are needed for the development of new fields, or as was announced by Mr alFalih in October 2010, Saudi Aramco’s President, a major effort to develop 280 tcf of non-traditional gas resources, would the funds have to be approved outside Saudi Aramco. Even then, the method to obtain such approval seems to facilitate Saudi Aramco’s work. Large investments requiring policy decisions would be coming from the Supreme Petroleum Council (SPC). The SPC is headed by the King and the Crown Prince, but, de facto is managed by the main ministers of the Kingdom (foreign affairs, defense, finance, oil, electricity, etc.). Hence, once the SPC makes a decision, any formal approval by the council of ministers, if needed, would be quasi-automatic.

In the past 20 years, Saudi Aramco has undertaken and brought on line some major projects. There are no records of Saudi Aramco announcing it would implement this or that project and not follow through with it. In other words, Saudi Aramco does not launch projects that are “subject to” funding or political decisions. Therefore, once a policy decision has been made by Saudi Aramco and accepted by the Supreme Oil Council, the company does not have to solicit funds. It is likely that Saudi Aramco can work from its internally generated funds, which are most likely to come directly from keeping a portion of the sales of oil. Technically speaking, Saudi Aramco’s accounts would be credited by standing instruction to their bank, ordering a certain percentage of the payments under the oil letters of credit to remain in Saudi Aramco’s accounts and the balance to be paid to SAMA. The net result of the format of the Saudi oil transactions is that Saudi Aramco can use its best judgment to manage the company and the oil production at all levels, without having to kowtow to the political, royal or military clans who may have different views on how to use the money.

In contrast, many NOCs seem to suffer from lack of investments in their oil fields. Iran today, in particular, appears to have minimal expenditures going into its oil and gas fields and industry in general. The lack of investments would explain why the country with the second largest gas reserves is a net importer of gas, why oil production declines slowly year after year, why the country’s refineries are not modern enough to meet the demand for gasoline and why the new energy-based industries built to use natural gas are either unable to obtain gas feedstock or only partial quantities.

In Iraq, the mismanagement of the oil industry under Saddam Hussein has led Iraq into a downward spiral in its oil exports capacity. Since Saddam Hussein’s downfall, the country has resumed exports but the fields have suffered greatly. The entire oil industry of Iraq requires enormous amounts of funds and technology to regain its past glory and to enable the entire country to benefit from its massive reserves. The realization of the problems has led the Minister of Oil, Mr Sharistani, to develop very successful rounds of bidding by the foreign companies, which will be reviewed below at more length.

The flow of funds from oil to the Kingdom of Saudi Arabia could be used as an example for many countries. Most countries with oil resources seem to have a greater need for funds than that which the oil delivers for them. Often their populations are very poor and very large, forcing the states to siphon all the money out of the NOC and to consider preservation of fields and modernization of oil infrastructure a luxury, which they cannot afford in the short term. Sometimes, the countries are under extreme stress, either internally or externally, and the priority becomes security, which leads them to spending money on their military and security apparatuses, such as in Chad and Sudan. Ultimately, Figure 4.2 on generic flows of funds for NOCs theorizes that the management of funds generated by the oil sales of the NOC is strongly centralized, usually in the hands of the various ministries of finance. Funds for investments (even in the investments absolutely required to maintain production) are decided upon by non-oil-
related people, either in the ministries of finance, or the council of ministers and the inner workings of the leaders cabinets. Faced with major immediate demands on whatever funds can be raised now, many countries will resort to little or no investments in their oil industries.

One could argue that with so much money available to the Kingdom, it is easy for the Saudis to allow Saudi Aramco to manage itself as efficiently as any major IOC and run its budgets free of interference from the government. Indeed even if it keeps a relatively small percentage from oil sales for managing the operations and investments needed to use best practices and maximize returns on its assets, the amounts are staggering. If indeed the funds used by Saudi Aramco amount to between 7% and 10% of the total oil income, it still amounts to between $18bn to 20bn per year in 2010.

However, the Saudi financial structure is not as obviously favorable as it would appear or is indicated by the large surpluses of today. Indeed, from the early 1980s to 1999, the Kingdom had some decent cash flows but was incurring yearly budget deficits of $10–20bn per year. Fortunately, the country’s financial authorities were and still are most professional. They managed to survive 20 years of budget deficit without having to resort to foreign borrowings by pushing their own local bank to purchase development bonds. The local borrowing of over $180bn by the Saudi government in the 1980s and 1990s, created a fairly tense situation between the local banks, their merchant owners and the state. However, it allowed the Ministry of Finance to keep funding the industrial development of the Kingdom. Most important in the context of this chapter, the civil service managed to maintain Saudi Aramco’s financial independence.

Unlike in many other oil states, the government did not resort to cutting the funding to Saudi Aramco, or force Saudi Aramco into re-opening the oil fields to foreign companies. When oil prices were down to the low teens in the late 1990s, the income of Saudi Arabia was around $35bn per year, eight times lower than in 2010 and deficits were mounting up. Hence, many in the Kingdom were clamoring to bring the IOCs back to expand production making Saudi Arabia sell huge amounts of oil, take market share away from other producers and ensure that the Saudis get as much cash as possible in a difficult world-wide glut. The efforts to bring back the IOCs culminated with a meeting in Washington organized by the then Ambassador, Prince Bandar bin Sultan, at which the then Crown Prince Abdullah bin AbdelAziz, asked the US IOCs to provide him with “suggestions” on how to maximize production. Of course, the IOCs were delighted to see an opening for them to have access to enormous reserves. However, as could be expected, the Saudi engineers and managers of Saudi Aramco and the Ministry of Petroleum and Minerals led by oil minister Ali al-Naimi, were adamant that they did not need the IOCs to improve the results of the Kingdom. One can assume that the oil experts in the Kingdom were arguing that bringing in the IOCs would deplete the reserves of the Kingdom too fast, flood the markets and thus decrease income even more. In the long term, they saw the Kingdom earning a bit more cash quickly, but ultimately impoverishing it irretrievably.

The stand taken by Ali al-Naimi and his colleague was indeed very courageous. He was taking on some of the strongest and most powerful princes, allied in their quest to bring back the American IOCs. Whether by sheer luck, or perhaps because of a very canny knowledge of the workings of OPEC, Ali al-Naimi was able to see a sudden rise in oil prices in 1999, which made Prince Bandar’s meeting with the IOCs totally moot, as the Kingdom’s revenues more than doubled that year and kept on increasing. At the same time, Saudi Aramco ran a very extensive public relations campaign to show how technically savvy they were. Indeed, until then, Saudi Aramco kept all its information quite secret, which ultimately could be interpreted as their seeking to hide a certain weakness. Very quickly they brought academics, engineers, bankers and journalists to their sites and research centers. They made very sophisticated presentations to all who would listen, particularly in the USA. Quite rapidly, the respect for Saudi Aramco spread to the governments and media abroad, as well as at home among both
the general Saudi public and the princes. Hence the pressure to interfere with the company’s management of the oil wealth declined. Saudi Aramco was able to demonstrate that it was as technologically advanced as any foreign IOC and therefore could protect the interests of the Kingdom better than ExxonMobil, Shell, or Total SA could. In fact, one could argue that Saudi Aramco by and large is managed like the best IOCs, but with the goal of developing the resources of the country for the long term, rather than creating short-term returns for the shareholders.

Few other NOCs can claim the same success in maintaining their independence and the professionalism of their companies. Certainly companies like Statoil of Norway and Petrobras of Brazil have shown their ability to maintain and develop their local energy industries. Both have become leaders in deep-sea technology, probably the most difficult frontier in the oil and gas industry. Like Saudi Aramco, they would be seen by the industry as managed like the best IOCs, with the ability to fund their efforts with minimal interference from their government, but with the aim of working for the long-term benefit of all the citizens of their countries.

However, the national oil companies of many other countries have not had the ability to manage their business, like a normal oil company would. Many NOCs have seen their companies decimated and their funding diverted, which ultimately led to a decline in oil production.

The graph below (Figure 4.2) shows how oil flows may work for a generic NOC. It does emphasize the financial links, which, if not formalized as is shown in Figure 4.1, show how NOCs can lose their ability to manage oil reserves.

Figure 4.2 summarizes the flow of funds of a NOC selling 1m. barrels of oil. This figure would seem to represent the pattern of very low investments in the oil industry for the sake of using funds for more urgent needs. The writer thinks that such a graph would apply to the likes of PDVSA and NIOC. In Figure 4.2, it is assumed that most of the funds are transferred directly to the Ministry of Finance, with only a minimum left for day-to-day expenses. Even these expenses may be subject to Ministry of Finance approvals. Should this graph be accurate, all

![Figure 4.2 Generic oil money flows for NOCs/per 1 million b/d](image)

**Notes:**
* Most buyers provide irrevocable Letters of Credits for a major bank confirmed by an accepted local bank. These L/Cs have to be for the $ amount and oil volumes agreed by long term contract and are payable at 30 day sight [ie 30 days from the loading of the oil on the tanker].

*Source: The Lafayette Group LLC 2008, 2009, 2010*
investments must go through the Ministry of Finance; and hence they are at the mercy of governments. Needless to say, in many cases the governments find more important priorities than investing in machinery or engineering for the maintenance of oil or gas wells. It is very likely that the decline in production witnessed in Iran is directly related to its lack of investments in its own fields. There should be little doubt that the managers and engineers at NIOC are highly professional. They know what needs to be done to create long-term production, but their budgets are so restricted that they cannot save their own country as its money is used for “more important” causes defined on the basis of ideology, rather than common sense economics and business. The Iranian minister of oil himself complained a few years ago that without substantial investments in the upstream, Iran could become a net importer of oil.6

In fact, what is remarkable in countries like Iran or Iraq, when under extreme sanctions, is the fact that the personnel of the local NOCs have managed to maintain relatively high levels of production. This must demand daily miracles and extremely hard work, but in the long term without access to large sums of investments to get the right technology, these NOCs will lose the battle with slowly evolving geological formations and water penetration. They will be unable to compete against other countries and other sources of energy without massive investments in field management and technology from abroad, mostly from Western firms.

The Venezuelan oil company, PDVSA is an interesting case study. The control of operations was taken over by President Chavez and his associates to the great annoyance of the management and many of the employees of the company. After a brutal strike in 2003, some 19,500 of about 45,000 PDVSA employees were fired.7 Today the number of employees has returned not only to normal but shows that PDVSA has become a haven of employment. From the 43,807 employees it had in 2005, the numbers have ballooned to 88,790 in 2009.8 Since then the production of oil has remained pretty constant at 2,900mbpd, with limited ups and downs. Production did spike by 300mbpd in 2008, owing to an increase in very heavy bitumen oil from the Orinoco basin. It declined in 2009, but remained 100mbpd higher than the production level in 2007, at 3,170mbpd. It is interesting to note that PDVSA, unlike most other state controlled NOCs, publishes a 97-page long annual report with very detailed information on the fields, production, cost of productions and investment plans.

In the context of this paper, it is interesting to note that PDVSA intends to increase overall production, mainly through development of the extra-heavy reserves, by 1.3mbpd and plans to invest $252bn between 2010 and 2015. PDVSA “hopes” to self-fund 78% of this amount, i.e. $196bn for six years, or $32bn per year. This could be an optimistic scenario. PDVSA gross income in 2009 was about $75bn per year, of which $24.7bn in 2009, $38bn in 2008 and $29.8bn in 200710 went to the state for taxes, social payments, dividends, etc. and about $48bn is used in production costs, overhead and inventory management. This leaves the company with only $2bn in cash, plus non-cash items, like depreciation of $5.7bn and other financial earnings of $5.8bn. In other words, PDVSA could be short of $18.5bn per year on its investment plan. The “hopes” of management to develop their industry and the needs of the country for employment and large funding from the country’s main resources contradict each other.

Of course, it could be that the discrepancy between hopes and realities is exaggerated by the PDVSA to make sure the government knows and understands that it would not be PDVSA’s fault if the increases in production cannot be obtained. Perhaps the writers of the annual report are aware that by showing that they need $252bn over 5 years, they will obtain less than a third of it, which would probably suffice to increase production by a planned 1.3mbpd. Indeed Saudi Aramco needed “only” $62bn to increase their net capacity by 3.5mbpd to 12mbpd.11 However, both the Iranian case and the Venezuelan case show the main weakness of 100%-controlled NOCs. If the government interferes extensively with the management of the company,
squeezes its financial ability to fund projects, maintenance and development of the oil fields as well as that of the downstream applications, and if it imposes large and inefficient numbers of employees on the company, it is then very likely that the NOC will fail in maintaining the value of the country’s main assets. In other words, the governments will be tempted to slowly strangle the goose that lays the golden eggs. It is to the great credit of Saudi Aramco, that it focuses on efficiency, and it is a credit to the Saudi government that it lets Saudi Aramco manage the “golden goose” for the ultimate benefit of the country as a whole.

**NOCs and IOCs working together**

In between the likes of Saudi Aramco and of NIOC or PDVSA lie a large number of NOCs whose approaches to management and funding have features from both sides, but have adapted to their own needs. Many NOCs have the financial resources, but are lacking the technical and human resources to rival Saudi Aramco. These companies will control sales of oil and gas but will be working closely with IOCs for exploration and exploitation. For example, AbuDhabi National Oil Company (ADNOC) works very closely with ExxonMobil, Chevron and Occidental. In Qatar, the Qatar Petroleum Company (QPC) contracts the development of its oil and mainly its huge North Dome gas field to ExxonMobil, Total, Maersk, etc. The local populations of AbuDhabi and of Qatar are so small that they would be unable to develop enough engineering capacity on their own or be very limited in their ability to produce at the levels they are producing presently. Hence, it is vital for them to rely on trusted IOC, and oil field technology companies like Halliburton or Schlumberger. The priorities of the governments of the small states of the Gulf Cooperation Council are not to Qatar-ize or UAE-ize the work force of their oil companies but to create enough managers to ensure a local understanding and control of the flow of funds and then to use the flow of funds to invest in industries which they will be able to manage for the long term.

This system has led to some very interesting investment decisions in energy based industries. Perhaps the most interesting example of this industrial investment approach is Qatar’s. The emirate decided to become the world leader in a few energy products, such as Liquid Natural Gas (LNG) and Gas To Liquids (GTL). Qatar is far from the main gas users of the world and cannot economically send its gas to Europe, India or China by pipeline as is being done between Canada and the USA, or between Russia and Western Europe. However, it needs to monetize its huge reserves of natural gas, which if left in the ground would be worthless. Export of gas can be done through transforming the natural gas into LNG or into GTL, which transforms methane into diesel fuel, ethylene, or a number of other fuels. Methane can also be transformed into ammonia and from ammonia into urea, a widely used fertilizer, as well as into a wide range of petrochemicals. On the other hand, it costs many billions of dollars to develop LNG trains, GTL plants, fertilizer plants and chemical complexes.

A great part of the cost of transforming natural gas into deliverable products is due to the very advanced technology required to successfully bring these products to market. Therefore, Qatar has relied heavily on the IOCs and other providers of advanced energy technology to become the largest world producer of LNG, producing 77m. tons by the beginning of 2011, and to become the world’s largest producer of GTL when the new JV with Shell Oil starts full operations as expected in 2011.

Unlike what happened in Venezuela in the past few years, or what happened in the 1970s and 1980s in Iraq, Libya and Algeria, when local governments nationalized the assets of the IOCs, the relationship between NOCs and IOCs is not always confrontational. Many NOCs rely on and sign substantial service agreements with the IOCs to explore and exploit oil reserves on behalf of the NOCs. ADNOC and Qatar Petroleum Company were mentioned above.
as examples of such an approach. Countries with very little capital and technology will use production sharing agreements (PSAs). PSAs are especially important in the Gulf of Guinea and surrounding areas where most countries, except Nigeria, have very little resources and experience. Unfortunately, IOCs have to take all the risk and therefore require very large returns. In most cases the PSAs guarantee a certain return to the IOCs. The contract will ensure that the expenses incurred by the IOC are paid up front, as well as the agreed share of profits and the guaranteed return, all ahead of any money passed on to the local NOCs. The NOCs or their states usually get a signing bonus, and ultimately get some cash payments on a yearly basis for the duration of production. Altogether, the NOCs get very little for their country when compared to how much they would get if they had been a Saudi Aramco type of company. On the other hand, if they do not sign PSAs they will not be able to exploit their own reserves and ultimately will get nothing.

The Iraqi model

An interesting model has been developing in Iraq in the past three years. The central Iraqi oil company (SOMO), suffered a great deal under Saddam Hussein’s rule, but managed to maintain a minimum amount of production. The sanctions made it very difficult for its production affiliates to obtain spare parts and technology, but through great feats of ingenuity managed to maintain almost 2mbpd. After the US invasion, the various Iraqi governments, prodded by the USA, attempted to increase production. The USA tried to push through a new oil law to stabilize the situation for foreign firms, and to create a comfortable environment for investment. However, the new draft law gave the biggest power over negotiations to the provincial governments, thereby providing them with greater funds and power to weaken the central government. This, of course, was greatly supported by the Kurdish provinces in the North, which assumed that the central government law would be passed and, thus in turn passed their own law defining the rules of engagement with IOCs. The vast majority of the Iraqi parliament, however, saw this law as a manoeuvre to weaken Iraq and instigate a de facto break-up of the country. They also saw that large oil companies with sales levels many times the GNP of medium size countries could negotiate much better deals for themselves in dealing with provincial governments, rather than negotiate with much more experienced and sophisticated central government experts. Hence, the federal law was never passed and is not likely to be passed in its present form any time soon. The absence of a definitive law, however, does not decrease the need for Iraq to improve its oil production. Iraq has 115bn barrels of reserves, second only to Saudi Arabia’s 269bn barrels (or third if one accepts the Iranian stated reserves of 137.6bn barrels). This figure developed under Saddam Hussein may be somewhat more than the reality, but is still very large. Iraq with proper management could produce as much, if not more, oil than Saudi Arabia for many years to come. Iraq needs money to develop and rebuild its economy and infrastructure now. Hence, it must increase production and sales as soon as possible. Consequently, to make up for the loss of technology and the brain drain it suffered for the past thirty years, the Iraqi government with the reluctant approval of the parliament agreed to bring back the IOCs, but not on regular PSA terms.

In 2009 the Ministry of Oil of Iraq, under the leadership of Ali Sharistani, decided to go through a round of bids for IOCs to propose service contracts (SCs) to develop the oil fields, which the ministry thought had potential for increased production. The bidding process was fairly long and subject to a lot of manoeuvring by the Iraqis and the IOCs, but suffice to say that it ended up quite favorably for the Iraqis when compared to PSAs negotiated by other
countries. The bids were handled in a transparent manner (quite literally, as all the bids were actually placed in a large Lucite box in full view of live TV coverage) with each IOC or groups of IOCs proposing to develop existing fields according to formulas agreed by the Iraqi government.

For example, ExxonMobil in association with Shell won the bid to expand production from 0.27mbpd to 2.5mbpd in the West Qurna 1 field, for which they will be paid a fee of $1.90 per barrel. ExxonMobil and Shell will invest over $25bn in drilling 1,000 wells to increase production and spend a further $25bn to operate the field. Furthermore, BP in joint venture with CNPC of China won the bid for the large Rumaila field to increase production from 1mbpd to 3.0mbpd for a fee, if successful, of $2.0 on the incremental production. BP’s share of the venture is 38%, CNPC is 37% and SOMO, the Iraqi central oil company, 25%. The SCs provided a reimbursement of the money spent to develop the fields, but did not guaranteed a rate of return on investment to the IOCs, which is the normal practice for PSAs. They also maximize the returns to the Iraqis especially if the market remains in the range of $70 per barrel to $80 per barrel. The IOCs for their part do not “own” the reserves and cannot pass them on their balance sheet, but it does give them access to substantial production, at less risk, if successful.

It is quite remarkable to see that, if the IOCs are successful in expanding the Iraqi oil production, Iraq will become the largest oil producer in the world at over 10mbpd within 15 years. Of course, it is less than sure that this will actually happen. After all, insecurity issues are still not resolved and the oil law, expected to stabilize relations between IOCs, the Kurdish territories and Iraq, is still languishing in the parliament. The insecurity and lack of stability are compounded by the fact that at the time of this writing Iraq has been without a government for 220 days, and the Kurdish separatists are still actively trying to undermine the control of oil resources by the central government. Nevertheless, the model established by Ali Sharistani is likely to be followed elsewhere and perhaps is the harbinger of a new model of relations between oil rich countries and the IOCs. It is a positive sign that in mid-October 2010, BP-CNPC announced that they had completed their first well, which would increase production of the Rumaila field by 100,000 bpd by November 2010.

“Mixed” ownership NOCs

An interesting NOC structure is that of companies often seen by most observers as being “national,” but which in fact are owned by large numbers of shareholders and whose shares are traded on the world markets. These companies, theoretically at least should be mostly interested in maximizing the interest of their shareholders, not necessarily in maximizing the benefit to their country of origin. Some of the main Chinese and Russian companies follow this pattern. Sinopec and CNOOC have large, publicly-traded shareholdings, issue detailed annual reports, and are subject to detailed analysis by stock market experts. Information on these firms is widely available on the internet.

The main question, of course, is whether or not the structure of the ownership makes these NOCs less dependent on government influence. Certainly, it would seem that Chinese companies are mainly following China’s strategic interest. For example, Chinese oil companies’ involvement in Sudan or Angola is focused on meeting China’s need for resources. From a purely capitalistic viewpoint, it could be argued that the interests of the shareholders of Sinopec are enhanced by the symbiotic relationship between the Chinese government and the company’s expansion. However, there can be many instances, when strong government guidance could also force Sinopec, or any other such company to make investments or payments that are
not in the interest of the shareholders. Whether, the voice of the shareholders could countermand governmental influence is not certain. On the other hand, should the governments take undue advantage of the company, it would make the NOCs’ ability to raise funds on the international markets much more difficult. In other words, having NOCs de facto owned by bodies other than their home government does not guarantee their independence, but protects them from gross interference to a certain degree.

By and large, the Chinese companies such as Sinopec, CNOOC or CNPC, are usually considered to be national oil companies. Their shares are traded on the large stock markets of the world. Still, they work closely with the Chinese government and benefit from major diplomatic and state support in their ventures overseas. These companies, like Saudi Aramco, appear independent from state interference in their day-to-day operations. They are however responsible for supplying enough oil and oil products to the country to manage its enormous growth with declining local oil reserves. So in many ways Sinopec et al. have to act as IOCs in searching for oil worldwide and signing PSAs in as many countries as possible. They have signed agreements in Sudan, where they are now producing 0.48mbpd. They are also present in Angola, which has now become the largest supplier of oil to China, exporting over 1mbpd there. Furthermore, Chinese NOCs are trying to find oil in Iran and have signed huge contracts there for both oil and gas exploration, exploitation and gas production of LNG. To this day, however, they have not produced one barrel of oil or a cubic meter of gas in Iran. Eventually the Chinese companies will probably begin production in Iran, but in the meantime they are increasing purchases from Saudi Arabia, Qatar and Angola.

Another hybrid form of NOC can also be seen in Russia. Some of the main Russian oil companies like Lukoil or Rosneft are officially independent, but it is common knowledge that oil policy gets managed directly from the Kremlin. They have made interesting joint ventures with IOCs especially in difficult geological terrains like in Sakhalin with Shell and ExxonMobil. It seems, however, that the relations between the large IOCs and their Russian counterparts are often difficult. In 2008 BP and its Russian tycoon partners had substantial disagreements, which led the TNK-BP joint venture to force BP’s appointed president out of the country. The relationship has improved somewhat lately, but as BP is reeling from its losses in the Gulf of Mexico debacle during 2010, the joint venture is now buying some of the assets of BP worldwide, such as BP’s assets in Venezuela.15 There is no doubt at this point that BP is no longer in the driver’s seat and that the Russian owners have control of the joint venture.

Russia is the largest world producer of oil, and its NOCs are very large and quite sophisticated. Hence, their motivation in dealing with the IOCs is either to gain technology, which they will then use on their own, or to gain access to distribution of their exports of gas and oil. In these two areas, politics tend to dominate. Thus NOCs independence is quashed by national interest, whatever the shareholding structure may be.

**Corruption issues**

Another factor that may be affecting many NOCs of the world is corruption. It is, of course, extremely difficult to find precise information about this phenomenon. Also it is difficult to define where and how the corruption takes place. In some cases the buyers of oil could be paying an extra amount to various state employees to provide a long-term contract at a favorable price. This is rendered difficult now by various anti-corruption laws that were passed in Western countries criminalizing corruption. Another form of corruption can take place when concessions are provided by the government of any given country and take the form of signing bonuses, not all of them paid to the state.
In other cases, payments are not made by the buyers of oil, but take place between the time when the oil companies receive payments under letters of credit and transfer funds to their Ministry of Finance. As shown in Figure 4.2 above, the amount accounting for the corruption needs to be paid through standing instructions by the state sovereign or ministers to the bank requesting it to transfer a certain percentage of all payments from the NOCs to its ministry to a third party somewhere in a fiscal paradise with strong regulations on discretion. This timing allows the money to never show up in the accounts of the country. The country does not need to divulge the income of its NOC and will only show the income received by the Ministry of Finance (or the equivalent agency, which would normally receive funds from the NOC). It is probable that it is in this manner that many royal and/or ruling elites are able to fund their private treasuries for distribution to their clan members. The amount being diverted from the oil revenues before the latter enter the accounts of the state is certainly not clear. If the amounts were too high, most observers could figure out the discrepancies, if it were too low, the recipients could start showing great dissatisfaction with their given leader.

The IOCs

Just as the NOCs do not fit in a neat definitional mode, the IOCs also cover a very large spectrum of activities and state influence. Obviously companies like ExxonMobil, Chevron or Shell seek to maximize the returns to their shareholders and are less involved in maximizing benefits to their home country than PDVSA or KPC. In fact, it is interesting to note that until the spill of the Macondo well in the Gulf of Mexico in 2010, BP, a British-based firm, was the largest producer of crude oil in the USA. Furthermore, the very large IOCs, have operations, as well as shareholders, all over the world. Hence, they are mostly free of government interference in their home countries. They are not, however, totally free of government intervention. In 1987, BP, then called British Petroleum, placed over 10% of its capital to the Kuwait Investment Office (KIO). This created a major row in British politics and Prime Minister Margaret Thatcher demanded that the Kuwaitis decrease their shareholding for fear that the Kuwaiti investment could lead to the control of a major British company vital to the British economy.

IOCs are also subject to highly nationalistic pressures. In mid-2005, China’s CNOOC made a $20bn offer to buy UNOCAL of California. CNOOC was mainly interested in the large oil reserves controlled by UNOCAL in the Far East. The board of UNOCAL was willing to accept the Chinese offer, but public clamor and political pressure quickly became intense and UNOCAL had to reject CNOOC’s offer. UNOCAL eventually became absorbed by Chevron. Hence, BP and UNOCAL, nominally independent, publicly traded international oil companies were seen by their respective publics as being national oil companies, subject to national interest. One can well imagine that today an attempted takeover of Total would trigger a similar strong reaction from the French government, and ultimately the purchase of a substantial percentage ownership in an IOC like Chevron or ExxonMobil by, say, a large sovereign wealth fund would be met by strident opposition in the USA. Smaller IOCs like ENI of Italy or Repsol from Spain are closer and more dependent on their government support and in this manner are more similar to the Chinese or Russian firms.

Perhaps the IOCs that are the most independent from government interference or less reliant on government support, are the small independently owned and managed oil companies. Many of these firms are only active in North America, but a number are moving internationally. Firms like Amarada Hess, Hunt Oil, Marathon, or even non-Western firms like Dubai’s Crescent Petroleum, which owns DanaGas, or DNO, also from Dubai, but part Norwegian, seem to act
without regard for the diplomatic and political interests of their countries of origin. These “smaller” firms are only small compared to the behemoths like ExxonMobil, BP or Saudi Aramco, but their asset base can be substantial. Perhaps, small firms being of less importance to their base country can actually focus more on their shareholders than on political consideration. This is especially true of a company like Crescent Petroleum in Dubai, which has shareholders from Iraq and the Gulf, but is also active in the Kurdish areas against the wishes of the Iraqi government and of the Gulf States.

Conclusion

It appears that the major drawback of the NOCs lies in their propensity to become overwhelmed by government control. Some governments are under huge pressure to increase income rapidly without investing in necessary, but very expensive, technologies and maintenance programs to improve and maximize their upstream sector as well as their downstream sector. This is quite obvious in Iran and Venezuela, and had been the case in Iraq under Saddam Husseim. The governments of the countries mentioned want their oil companies to maximize income. Thus, in the OPEC meetings, they will usually ask for larger quotas and demand higher prices. However, even with higher quotas, they tend to be unable to increase production reliably, and when able, will not cut production when needed to maintain prices to maximize income. They will tend to freeload on the cuts made by the Saudis and other Gulf producers. The huge investments needed to maintain and develop the upstream and downstream in the countries of highly controlled NOCs just do not get made as the governments find higher priorities. The lack of investment, of course, slowly strangles the goose that had laid the golden eggs in the first place.

In contrast, the IOCs, like ExxonMobil, Chevron, Shell, BP or Total appear often to be more disciplined and better able to promote the proper management of the fields. They rely on the most advanced technology to extract the best of the geology and will develop technology to maximize their downstream activities. As a consequence, many of the NOCs have come to rely on the IOCs to develop the their resources. It is with some trepidation that many NOCs and their governments are watching to see if Iraq will be successful in increasing its production from 2.3mbpd to almost 10mbpd within the next 10 to 15 years through its very aggressive management of the production agreements signed with the major IOCs.

As we have seen some NOCs, like Saudi Aramco, Statoil or Petrobras, while being closely monitored by their governments have managed to keep their distance from overarching state interference. In fact some of these firms are as technologically advanced as the major IOCs and in some cases even more advanced than most IOCs. It seems indeed, that NOCs by and large should be the companies that will be more likely to succeed. They do control most of the world oil and gas reserves. If they could ensure a certain financial independence they would be able to increase their influence worldwide.

In cases where the NOCs do not have enough local crude oil reserves to draw from, they have started going international. This has been particularly the case of the Chinese companies who compete directly with the IOCs in Africa and Iraq and try to take advantage of the political tensions between the IOCs home countries and Iran.

In short, it seems that the NOCs and the IOCs are actually much closer than is often perceived. On the one hand, the management of technology, assets and finance of NOCs, like Saudi Aramco, Petrobras, Statoil, Sinpec and CNOOC are looking increasingly like the major IOCs. Moreover, they are more frequently going overseas, except Saudi Aramco, to develop resources there or merely sell their technology. They are also going extensively downstream beyond refining into petrochemicals, just like the IOCs.
Ultimately the goals of the NOCs and the IOCs may be different in that the NOCs are thinking more to maximize the long-term impact to their country, while the IOCs tend to seek maximization of income to their shareholders. However, in both cases, the result may end up being the same. The NOCs need to maximize income for the long run, while the IOCs require long-term thinking as they do have a ten-year lead time from decision to refining. Thus, it is not surprising that many NOCs are moving to privatize portions of their shareholding and like Total, Sinopec, Rosneft or Lukoil did some years back, may become increasingly owned by the public at large, both in their home country and internationally.

Notes

1 www.hartenergy.com/pr/20100318_RefinerAwards.pdf
2 In this chapter, the word “Gulf” will refer to the Gulf that lies between the Arabian Peninsula and Iran. Both sides of the Gulf are adamant and strident about the use of Arabian Gulf vs. Persian Gulf, both claiming that without any doubt they use the right nomenclature and in doing so are backed by history. The chapter will therefore use only the word “Gulf,” thus avoiding taking side in the controversy, but probably insuring the ire of both parties.
3 After the various mergers in the oil industry in the past 30 years, there are only two left, ChevronTexaco and ExxonMobil.
4 Saudi Gazette, September 14, 2010.
6 PFC Energy in “National Iranian Oil Company” NOCs Strategy and Performance Profiles, Washington 2006, p. 47, quoted the then Minister of Oil Mr. Vaziri-Hamaneh, that due to lack of investments in the oil fields, Iran’s production was declining by 500,000 per year and at the price of oil at that time estimated that Iran would have to pay out more than it takes in, by 2016.
7 From the Human Rights Watch Report, quoting Rafael Ramirez, President of PDVSA “We removed 19,500 enemies of the country from this business” referring to the employees fired after the 2002 strike. www.hrw.org/en/news/2010/09/22/cj-vezs-fix
8 PDVSA Annual Report, p. 41. The report can be found on PDVSA.com, “informes financieros.”
9 “espera” in the Spanish text in the PDVSA Annual report, op. cit. p. 43.
12 It was widely reported in the press that Iraq adjusted its reserves in September 2010 to 143bn barrels. Unsurprisingly, the Iranian oil ministry countered the Iraqi claim by announcing new reserves totaling 150.3bn barrels. Both of the claims appear highly unreliable due to their lack of any scientific justification.
13 Guardian.co.uk, ExxonMobil wins $50bn contract to develop West Quran oilfield. November 5, 2010.
14 bp.com/genericarticle.do?categoryld=2012968&contentId=7057650
15 Dow Jones Newswires 10–18–2010 “BP Agrees to Sell Assets to TNK-BP for $1.8billion”